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17 UNITED STATES DISTRICT COURT
18 NORTHERN DISTRICT OF CALIFORNIA
19 SAN FRANCISCO DIVISION

20 WAYMO LLC,

Case No. 3:17-cv-00939-WHA

21 Plaintiff,

**DEFENDANTS UBER
TECHNOLOGIES, INC., OTTOMOTTO
LLC, AND OTTO TRUCKING LLC'S
MOTION FOR SUMMARY
JUDGMENT OF
NON-INFRINGEMENT**

22 v.

23 UBER TECHNOLOGIES, INC., OTTOMOTTO
24 LLC; OTTO TRUCKING LLC,

25 Defendants.

Date: June 8, 2017
Time: 8:00 a.m.
Ctrm: 8, 19th Floor
Judge: The Honorable William Alsup
Trial Date: October 2, 2017

26
27 **REDACTED VERSION OF DOCUMENT SUBMITTED UNDER SEAL**
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NOTICE OF MOTION AND MOTION

PLEASE TAKE NOTICE that on June 8, 2017, at 8:00 a.m., or as soon thereafter as the matter may be heard, in the United States District Court for the Northern District of California, San Francisco Courthouse, located at 450 Golden Gate Avenue, San Francisco, CA, in Courtroom 8 before the Honorable William Alsup, Defendants Uber Technologies, Inc., Ottomotto LLC, and Otto Trucking LLC will, and hereby do, jointly move for summary judgment of non-infringement of United States Patent Nos. 8,836,922, 9,285,464, and 9,086,273.

Defendants' motion is based on this Notice of Motion and Motion, the accompanying Memorandum of Points and Authorities, the concurrently filed Declaration of James Haslim, Declaration of Esther Kim Chang, and all exhibits thereto, all documents in the Court's file, any matters of which this Court may take judicial notice, and on such other written and oral argument as may be presented to the Court.

Dated: May 2, 2017

MORRISON & FOERSTER LLP

By: /s/ Michael A. Jacobs
MICHAEL A. JACOBS

Atorneys for Defendants UBER TECHNOLOGIES, INC., OTTOMOTTO LLC, and OTTO TRUCKING LLC

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1 **TABLE OF ABBREVIATIONS**

Abbreviation	Description
Chang	Declaration of Esther Kim Chang in Support of Motion for Summary Judgment of Non-infringement
Defendants	Uber Technologies, Inc., Ottomotto LLC, and Otto Trucking LLC
Haslim	Declaration of James Haslim in Support of Motion for Summary Judgment of Non-infringement
Kintz	Declaration of Gregory Kintz in Support of Plaintiff Waymo LLC's Motion for Preliminary Injunction (ECF No. 25-61)
Kintz Reply	Reply Declaration of Gregory Kintz in Further Support of Plaintiff Waymo LLC's Motion for Preliminary Injunction (ECF No. 245-5)
Uber	Uber Technologies, Inc.
Waymo PI Motion	Plaintiff Waymo LLC's Motion for Preliminary Injunction (ECF No. 24)
Waymo PI Reply	Reply in Further Support of Plaintiff Waymo LLC's Motion for Preliminary Injunction (ECF No. 254)

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INTRODUCTION

2 Waymo has confirmed that its patent infringement allegations were indeed a misfire.
3 Three of the four asserted patents, United States Patent Nos. 8,836,922, 9,285,464, and 9,086,273,
4 require a single lens for transmitting and receiving light. Waymo accused Uber’s Fuji LiDAR of
5 infringing these patents claiming a single, common lens architecture, a monostatic design that
6 Waymo characterized as “vastly different” from the multiple, separate lens designs in the prior
7 art. However, Fuji is a bistatic system that uses separate lenses for transmitting and receiving
8 light. Waymo’s expert Gregory Kintz, who first opined that Uber’s Fuji design “definitively”
9 used a single, common lens design, now has backtracked completely, admits Fuji does not use
10 Waymo’s patented design, and has withdrawn his infringement opinion.¹

11 Left grasping at straws, Waymo now focuses its single, common lens patent allegations on
12 Spider—a design that Uber never completed and subsequently abandoned more than five months
13 ago. Waymo’s expert admits that there is no evidence a completed Spider LiDAR was ever
14 made, used, sold, offered for sale, or imported. A device which does not exist—and never has
15 existed—cannot infringe. Lacking any evidence of a single *act* of infringement, Waymo cannot
16 salvage its Fuji allegations by transferring them to Spider. Summary judgment of non-
17 infringement should be granted for the ’922, ’464, and ’273 patents.

STATEMENT OF FACTS

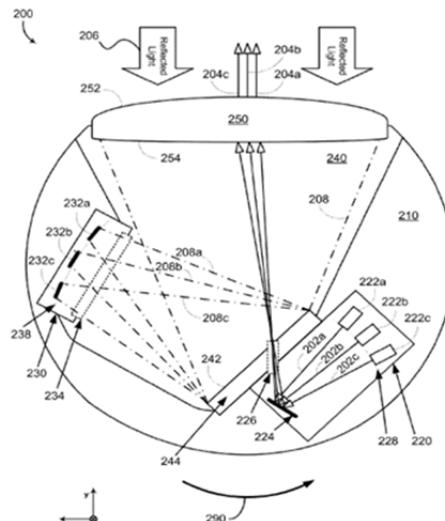
A. The Asserted '922, '464, and '273 Patents Require a Single, Common Lens for Transmitting and Receiving Light

21 Waymo describes the '922 and '464 patents as directed to a “single lens design [that] was
22 (and remains today) vastly different from commercially available LiDAR systems” because
23 “[p]rior systems had used separate lens assemblies—often with multiple lens elements—for the
24 ‘transmit path’ and the ‘receive path.’” (Waymo PI Motion at 4.) Waymo lauds this monostatic

¹ Defendants reserve the right to subsequently move for summary judgment of non-infringement of Waymo’s fourth asserted patent, U.S. Patent No. 9,368,936. The instant motion, however, is prompted by statements made by Waymo and Mr. Kintz, demonstrating that no genuine issue of material fact exists with respect to the three “single, common lens” patents. Mr. Kintz did not opine either way on the ’936 patent.

1 design as “revolutionary” and enshrines it as the centerpiece of its purported inventions. (Waymo
2 PI Motion at 4.)

3 Figure 2 of both the ’922 patent and the ’464 patent² illustrates this single, common lens
4 design. As shown in Figure 2, light beams travel along the transmission path (**202a-c**) from the
5 transmit block, through a single lens (**250**) that collimates the light beams for transmission into
6 the environment surrounding the LiDAR device. (Chang Ex. 1, ’922 patent at 11:62-12:43.) The
7 reflected light beams are focused by the same lens (**250**), and the focused light travels along
8 receive path (**208**) to the receive block.

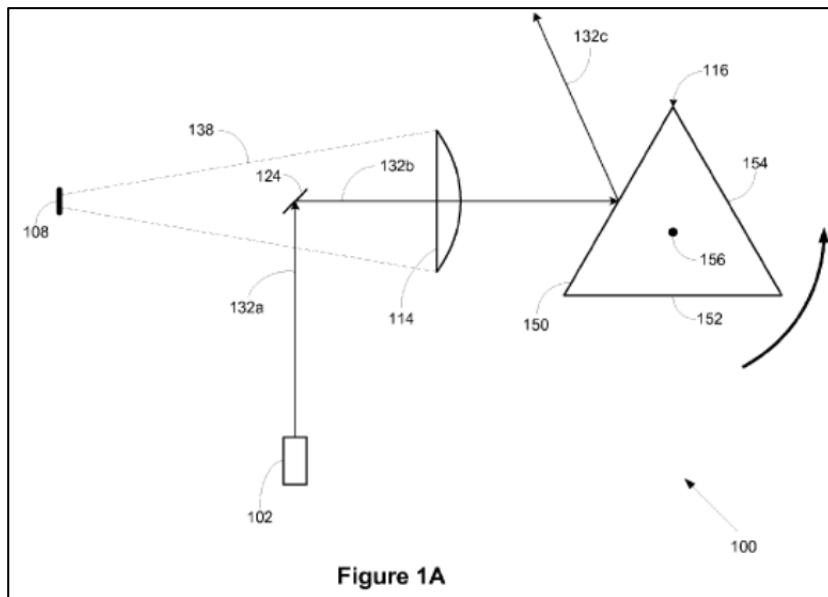


17 FIG. 2

18 The apparatus claims of both the ’922 patent and the ’464 patent all require this single,
19 common lens. The claims recite a “lens” that both “collimate[s] the light beams for **transmission**
20 into an environment of the LIDAR device” and “**focus[es] the collected light** onto the detectors
21 via the receive path.” (Chang Ex. 1, ’922 patent, Claim 1 (emphasis added); Chang Ex. 2, ’464
22 patent, Claim 1 (emphasis added).) The method claims of both patents recite similar language to
23 require “a lens” that is “collimating” the “light beams for transmission into an environment of the
24 LiDAR device” and that is “focusing” the “collected light onto a plurality of detectors.” (Chang
25 Ex. 1, ’922 patent, Claim 15; Chang Ex. 2, ’464 patent, Claim 16.)

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28 ² The ’464 patent is a continuation of the application that resulted in the issuance of the
’922 patent.

1 The '273 patent also requires a single, common lens for transmitting and receiving light.
 2 As illustrated in Figure 1a, for example, the light is collimated by a single lens **114** and
 3 transmitted into an environment of LIDAR device to be reflected by one or more objects in the
 4 environment. (Chang Ex. 3, '273 patent at 4:56-60.) This light can then be reflected back into
 5 the same lens **114**, which focuses the object-reflected light onto one or more detectors. (*Id.* at
 6 4:61-65.)



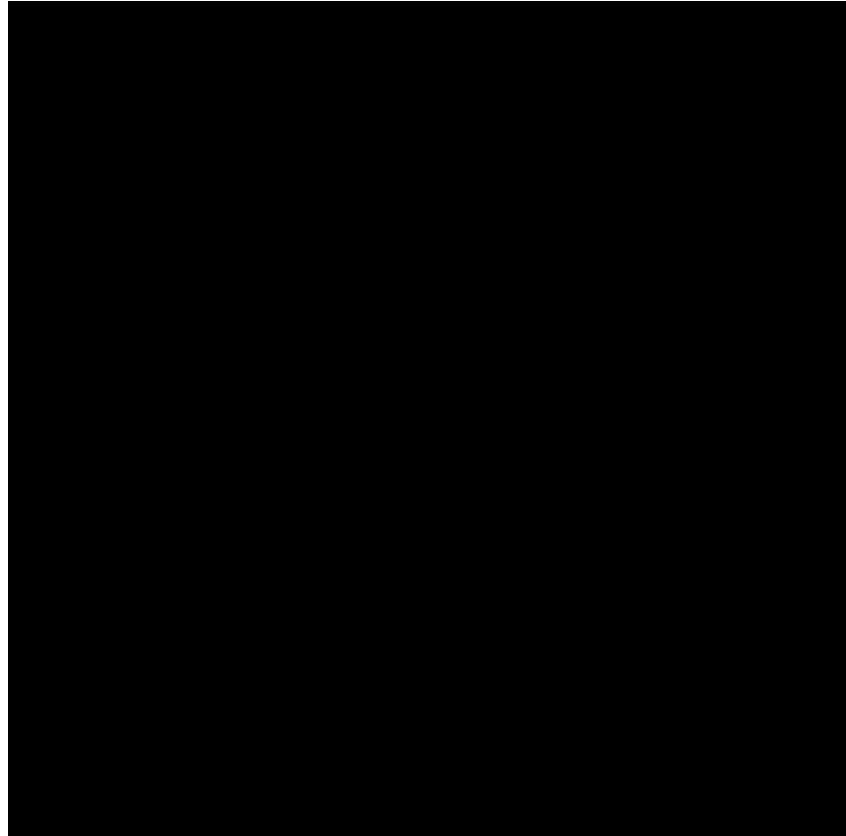
1 All the apparatus claims of the '273 patent require an “objective lens” or a “lens” that
 2 “collimate[s]” to provide light “for transmission into an environment of the LIDAR device” and
 3 “(ii) focus[es]” any “object-reflected light” onto a detector. (*Id.* at Claims 1, 14.) The method
 4 claims of the '273 patent uses similar language to require a “lens” for “collimating” light for
 5 “transmitting” and “focusing” the “object[ed]-reflected light” onto a detector. (*Id.* at Claim 17.)

B. Accused Products

1. Fuji Does Not Use a Single, Common Lens

2 Uber's Fuji design contains two optical cavities: a medium-range cavity and a long-range
 3 cavity. (Haslim ¶ 3.) Each cavity is bistatic, using one lens for the outbound transmit beam and a
 4 separate lens for the inbound receive beam. (*Id.* ¶ 3.) As illustrated in the annotated top-view
 5 cross-section CAD drawing of Fuji (below), light is emitted from diodes on the transmit block
 6 and travels to the transmit lens along the transmit path (shaded in red). (*Id.* ¶ 4.) Reflected light

1 is collected and focused by the receive lens, and this light travels to the receive board along the
2 receive path (shaded in purple). (*Id.* ¶ 4.)



17 The transmit path and the receive path in each cavity do not overlap. (*Id.* ¶ 5.) Fuji does
18 not use a single, common lens for transmitting and receiving light. (*Id.* ¶ 5.)

19 Mr. Kintz testified at deposition that he has withdrawn his infringement opinion for Fuji
20 and that Fuji's multi-lens design does not infringe the '922 and '464 patents. (Ex. 4, Kintz Dep.
21 Tr. 221:2-9.) Mr. Kintz also admits that the '273 patent is directed to a "common lens,"
22 "monostatic system," and that Fuji is a "bistatic system that does not have a common lens." (*Id.*
23 at 225:16-24.)

24 **2. Spider Was Never A Completed LiDAR System**

25 Uber abandoned Spider, a fiber laser based LiDAR design, in late October 2016, because
26 of the complexities of the design, the anticipated difficulty of scaling the manufacturing of the
27 design, and its large size, heavy weight, and high power requirement. (*Id.* ¶¶ 12-13.)

28

1 Before abandoning the Spider project, Uber built a few components for testing purposes,
 2 but never completely assembled these parts and never built all of the parts needed for a working
 3 LiDAR. (*Id.* ¶ 6.) Spider was designed to have eight optical cavities, for example, but Uber built
 4 only one optical cavity for testing purposes and never mounted that single test optical cavity onto
 5 the rotating base. (*Id.* ¶ 11.) For the one test optical cavity that was built, Uber was unable to
 6 place the transmit fibers accurately enough to align the eight transmit fibers to the eight
 7 photodetectors. (*Id.* ¶ 11.)

8 As Uber never built all of the components needed for a functional prototype, much less a
 9 complete LiDAR device, Spider was never made, used, sold, offered for sale, or imported. (*Id.*
 10 ¶ 6.)

11 Uber has no plans to revive the abandoned Spider project. (*Id.* ¶ 6.) In order to prepare
 12 Spider components for inspection in this case, an Uber engineer had to collect them from
 13 scattered locations: a majority of the mechanical parts from a storage locker, eight fiber lasers and
 14 connected electrical components from under a tarp in the basement, and the one test optical cavity
 15 from a plastic bin near the storage locker. (*Id.* ¶¶ 15-17.)

16 Mr. Kintz concedes that there is no evidence Spider was ever assembled into a working
 17 LiDAR. (Chang Ex. 4, Kintz Dep. Tr. at 215:5-10.) Mr. Kintz has not seen any evidence that
 18 Spider was ever used as a complete working LiDAR. (*Id.* at 215:11-14.) He is not aware of any
 19 evidence that Spider was ever sold, offered for sale, or imported. (*Id.* at 215:15-24.) Mr. Kintz is
 20 not aware of any evidence of development of Spider after October 2016. (*Id.* at 215:25-216:11.)

21 **SUMMARY JUDGMENT OF NON-INFRINGEMENT SHOULD BE GRANTED**

22 A. **Fuji Does Not Infringe the '922, '464, and '273 Patents Because It Lacks a
 23 Single, Common Lens**

24 The parties do not dispute that Fuji lacks the single, common lens required by Waymo's
 25 single-lens patents. On the basis of a single printed circuit board drawing, Mr. Kintz concluded
 26 that Fuji "definitively" used the monostatic design claimed in the '922 and '464 patents. (Kintz
 27 ¶¶ 72, 113.) Mr. Kintz has expressly withdrawn his infringement opinion for the '922 and '464
 28 patents and now admits that Fuji does not infringe either patent. (Kintz Reply ¶ 80; Ex. 4, Kintz

1 Dep. Tr. 221:2-9.) Mr. Kintz also admits that the '273 patent requires a single, common lens,
 2 which Fuji's bistatic design does not use. (Chang Ex. 4, Kintz Dep. Tr. 225:16-24.) There is no
 3 genuine dispute here, and summary judgement of non-infringement should be granted.

4 **B. Spider Does Not Infringe the '922, '464, and '273 Patents Because It Was
 5 Never Made, Used, Sold, Offered for Sale, or Imported**

6 Waymo has redirected its single-lens patent allegations at Uber's Spider design. (Waymo
 7 PI Reply at 9-10.) Spider is a red herring.

8 The '922, '464, and '273 patents all require a LiDAR device. The apparatus claims of the
 9 '922, '464, and '273 patents recite “[a] light detection and ranging (LiDAR) device” as the
 10 preamble. (See e.g., Chang Ex. 1, '922 patent at Claim 1.) The “LiDAR device” in the preamble
 11 is limiting because “limitations in the body of the claim rely upon and derive antecedent basis
 12 from the preamble.”³ *Pacing Techs., LLC v. Garmin Int'l., Inc.*, 778 F.3d 1021, 1024 (Fed. Cir.
 13 2015) (citations omitted). In each of the three patents, the body of the independent apparatus
 14 claims each recites “[an/the] environment of the LiDAR device,” which derives its antecedent
 15 basis from the preamble. (See e.g., Chang Ex. 1, '922 patent at Claim 1.) Furthermore, the
 16 dependent apparatus claims in each of the three patents recite the positive limitation “[t]he
 17 LiDAR device,” deriving their antecedent bases from the preamble of their respective
 18 independent claims. (See e.g., id., '922 patent at Claim 2-15.) The “LiDAR device” preamble in
 19 each of the three patents is therefore limiting. *Pacing Techs.*, 778 F.3d at 1024.

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21

22 ³ Waymo does not contend that Spider infringes the method claims of the single-lens
 23 patents. Nonetheless, the method claims of the '922 patent and '464 patent require “rotating a
 24 housing of a light detection and ranging (LiDAR) device about an axis.” Uber never built all the
 25 cavities of the Spider design and never mounted the single test optical cavity onto the rotating
 26 base. (Haslim ¶ 11.) Spider components did not have a housing that rotated about an axis.

27 The method claims of the '273 patent require “transmitting the collimated laser beam into
 28 an environment” and “focusing, by the lens, the object-reflected light through a focusing path
 29 onto a detector.” For the one test optical cavity that was built from the Spider design, Uber was
 30 unable to align the eight transmit fibers to the eight photodetectors. (Haslim ¶ 11.) Spider
 31 components did not transmit light into the environment and focus the reflected light onto a
 32 detector. Mr. Kintz conceded that the receive block (the avalanche photodiode detectors) of
 33 Spider has not been mounted in the one test optical cavity. (Chang Ex. 4, Kintz Dep. Tr. at
 34 211:13-213:7.)

1 Spider was never a completed, working LiDAR device, and Uber has no plans to revive it.
 2 (Haslim ¶ 6.) Mr. Kintz concedes that there is no evidence that Uber ever made, used, sold,
 3 offered for sale, or imported into the United States a completed, working Spider device. (Chang
 4 Ex. 4, Kintz Dep. Tr. at 215:5-24.)

5 Mr. Kintz's infringement claim charts do not give rise to any issues of disputed fact. His
 6 charts cite only to testimony about Spider's intended design—not any evidence that a completed
 7 Spider device ever existed. (Kintz Reply ¶ 84.) He conceded that he never personally inspected
 8 Spider components, and he never saw evidence of a completed Spider prototype. (Chang Ex. 4,
 9 Kintz Dep. Tr. at 207:17-208:7.) Mr. Kintz admits that the components, in their current
 10 configuration, would not function. (*Id.* at 209:15-20.)

11 Uber cannot infringe by merely designing a device that does not and has never existed.
 12 Waymo cannot show an act of infringement, and summary judgment should therefore be granted.
 13 (35 U.S.C. 271(a).)

14 **CONCLUSION**

15 For the foregoing reasons, summary judgment of non-infringement of the '922, '464, and
 16 '273 patents should be entered, and Waymo's Third, Fourth, and Sixth Causes of Action should
 17 be dismissed with prejudice.

18
 19 Dated: May 2, 2017

MORRISON & FOERSTER LLP

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21 By: /s/ Michael A. Jacobs
 MICHAEL A. JACOBS

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23 Attorneys for Defendants UBER TECHNOLOGIES,
 INC., OTTOMOTTO LLC, and OTTO TRUCKING
 LLC

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